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CLEANUP WORK PLAN
CIVIL ACTION NO. N89-0113
CONSENT DECREE

EIS ENVIRONMENTAL ENGINEERS, INC.

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MARCH 4, 1998

PREPARED FOR
ACCRA PAC GROUP

PREPARED BY
EIS ENVIRONMENTAL ENGINEERS, INC.
1701 NORTH IRONWOOD DRIVE
SOUTH BEND, INDIANA 46635

1.0 INTRODUCTION

This Cleanup Work Plan is submitted in accordance with the provisions of Civil Action No. N89-0113, Consent Decree lodged with the United States District Court for the Northern District of Indiana, South Bend Division. More specifically, it is the document to be submitted by Accra Pac, Inc., pursuant to Paragraph 12.b of the Consent Decree and Paragraph II(B)(6&7) of the Scope of Work.

The Scope of Work describes a Health and Safety Plan and a ten point Cleanup Work Plan. For future utilization, the Health and Safety Plan has been prepared as a separate document. Ten points of the Cleanup Work Plan include:

1. The schedule for completion of the Cleanup;
2. Method for selection of the contractor;
3. Method for implementation of the Construction Quality Assurance Plan;
4. A groundwater monitoring plan;
5. Methods for satisfying permitting requirements;
6. Methodology for implementation of the Operation and Maintenance Plan;
7. Tentative formulation of the Cleanup team;
8. Procedures and plans for the decontamination of equipment and the disposal of the contaminated materials;
9. Method for determining the baseline contaminant concentration in the uppermost groundwater aquifer; and
10. Method(s) for determining the points of compliance, for both the soil and groundwater, with the Performance Standards set forth in this SOW.

The above points 1 through 10 of the Cleanup Work Plan are labeled (a.) through (j.) in Paragraph II (B)(7) in the Scope of Work and are also covered in the Consent Decree although not necessarily in the same order.

Of the above items, numbers 1, 4, 9, and 10 have been prepared for, presented to, and approved by the EPA in previous submittals. This document will reference the original submittal document and date for these items and provide a brief synopsis of each. Nothing in this document is intended in any way to modify the original submittals as approved.

Similarly, most of the other Cleanup Work Plan items have been discussed and developed to some degree in previous submittals. This document will provide references for those submittals and will supplement them as required to fulfill the requirements of this submittal. When needed for clarity, this document will

reference the original submittal document and date for these items and provide a brief synopsis. Nothing in this Cleanup Work Plan is intended in any way to modify the original submittals as approved.

Pursuant to Paragraph 12.c of the Consent Decree, "(U)pon approval of the Work Plan by the EPA, after a reasonable opportunity for review and comment by the State, Defendants shall implement the activities required under the Work Plan." Since "reasonable" is not defined, the guidance of the USEPA Site Coordinator is requested in making this determination. It should also be noted that the same paragraph also specifies that "(U)nless directed by the EPA, Defendants shall not commence physical activities on the site prior to approval of the Work Plan."

With regard to submittals, Paragraph 12.b of the Consent Decree also requires future submittals of "all plans, submittals, and other deliverables required under the approved Work Plan." This submittal fulfills all requirements related to the Work Plan. Future submittals will be limited to periodic sampling and progress reports and closure documents. However, the Cleanup Team will keep the USEPA Site Coordinator informed of progress, especially through the construction phase, and will respond to any information requests from the Site Coordinator.

II. Schedule

The Site Cleanup effort has been divided into three phases: bioventing, biosparging, and groundwater treatment, as needed, to achieve the Performance Standards required by the Consent Order. Installation of the bioventing system will begin immediately upon approval of the Cleanup Work Plan. Biosparging will be implemented later, based on the progress of the bioventing. A two to three year time span is anticipated before biosparging is initiated. Biosparging will also be active for several years. These phases will be followed by groundwater treatment. A date for "completion" of the Cleanup cannot be forecast at this time.

A formal submission of this schedule was made as a part of the Preliminary Design Submittal (July 31, 1997). This schedule will be updated yearly.

III. Contractor Selection

The construction activities associated with implementing the Cleanup Plan are not major in scope. Selection of the contractors to be used will be made by the Supervising Contractor based on experience and past performance, with the consent of Accra Pac.

IV. Implementing the CQAP

The Construction Quality Assurance Plan (CQAP) was one of the documents submitted as part of the Final Design Submittal (November 25, 1997). The CQAP involves on-site inspection of the construction with emphasis on well installation. Piping installations will be monitored, but are not considered critical as the pressures used in the operating systems will be very low. No off-site testing is required.

All of the CQAP functions will be assigned to staff members from the Supervising Contractor. The CQAP specifies the qualifications required for oversight of each part of the work.

V. Groundwater Monitoring Plan

The groundwater monitoring plan and procedures are contained in the submittal titled Predesign and Compliance Monitoring Plan (May 13, 1996). The plan identifies six (6) monitoring wells to be sampled semi-annually for fifteen (15) target VOC compounds during the remediation.

VI. Satisfying Permitting Requirements

No permits will be required for the planned Cleanup. All of the emissions from the remediation systems will be VOCs. The lowest applicable threshold for regulation of emissions is fifteen (15) pounds per day, which is a State level for source registration. The planned operating rates for the bioventing and biosparging do not approach this level as the primary removal is by insitu biodegradation. Groundwater treatment systems such as air stripping would not have the potential to reach this air emission level due to the low concentrations of contaminants to be removed from the groundwater.

VII. Implementing the Operating & Maintenance Plan

The Operating and Maintenance Plan (November 24, 1997) was submitted as a part of the Final Design Submittal. Initially, the plan will the carried out by the Supervising Contractor's staff. When the system reaches stable operation and written procedures have been developed, some tasks may be delegated to Accra Pac personnel or contractors. Overall system operation and operating strategy will remain under the control of the Supervising Contractor.

VIII. Formulation of the Cleanup Team

H. Stephen Nye, P.E.	Supervising Contractor	EIS Environmental Engineers
James M. Hanlon, P.E.	Project/Engineering Manager	EIS Environmental Engineers
J. C. Sporleder, C.P.G.	Project Geologist	EIS Environmental Engineers
John R. Wingard, P.E.	Owner's Representative	Accra Pac

The above individuals will serve in the capacities shown. If there is a change, the USEPA Site Coordinator will be notified. These individuals may delegate parts of their duties or assume additional duties, as needed.

IX. Decontamination

At this point, the only decontamination to take place will be associated with the drilling of the sparging and venting wells. Decontamination of the drill rig will be done in the contaminated area and all soil and water from this process will be distributed over the contaminated area for treatment during the remediation of the site. There is nothing in the plan that will require the disposal of contaminated materials off site.

X. Baseline Contaminant Concentration

The baseline groundwater sampling was completed on September 30, 1996 and reported in Baseline Groundwater Monitoring (October 31, 1996). The methodology of sampling and analysis are described in the report. Baseline concentrations at each groundwater monitoring well were shown in Table 4.2 of that report, and included herewith.

FROM "BASELINE GROUNDWATER MONITORING" (10-31-96)

TABLE 4.2

BASELINE VOC 15 CONCENTRATIONS AND CLEAN-UP LEVELS[1] FOR FUTURE GROUNDWATER REMEDIATION EVALUATIONS

	COMPLIANCE WELL/SAMPLE ID				
	MW-4	MW-7	MW-10B	MW-14	MW-15
Detected VOC (ppb)[2]	4,096.6	1,749.6	1,6510	99,620	82,250
Number Non-Detects[3]	6	2	4	5	12
EQL[4]	5	2	10	100	100
Non-Detected VOC (ppb)[5]	30	4	40	500	1,200
½ Non-Detected VOC (ppb)[6]	15	2	20	250	600
Baseline VOC 15 (ppb)[7]	4,111.6	1,751.6	16,530	99,870	82,850
5% Baseline VOC 15 (ppb)[8]	205.58	87.58	826.50	4,993.5	4,142.5

Notes:

(1) Baseline data were calculated from the analyses of 15 target Volatile Organic Compounds (VOC 15) as obtained from the September 30, 1996, baseline groundwater monitoring event for the site located at 2626 Industrial Parkway, Elkhart, Indiana. See Table 4.1 and Analytical Reports in Appendix A for individual VOC results. See the May 13, 1996, report, "Predesign and Compliance Monitoring Plan" for details for the use of baseline results in the evaluation of future compliance monitoring results.

(2) Detected VOC 15 = Total concentration of detected VOC. See Table 4.1 and Analytical Reports in Appendix A for details.

(3) Number Non-Detects = Number of target VOC parameters for which contamination was not detected.

(4) EQL = Estimated Quantitation Limit.

(5) Non-Detected VOC = The product obtained by multiplying the number of Non-Detected VOC by the EQL.

(6) ½ Non-Detected VOC = The quotient obtained by dividing the Non-Detected VOC by 2.

(7) Baseline VOC 15 = The sum obtained by adding the Detected VOC 15 to the ½ Non-Detected VOC. Baseline VOC 15 is a total value, comprising the sum of the 15 individual target VOC parameters. Note that VOC 15 values listed on individual Analytical Reports (see Appendix A) may vary from VOC 15 values listed in the above Table 4.1 because the values listed on the Analytical Reports were rounded.

(8) 5% Baseline VOC 15 = 5% of the baseline VOC 15 concentration. This value represents a 95% reduction in the concentration of VOC 15 and is intended for use as a well-specific clean-up level in order to evaluate if remediation is complete.

XI. Performance Standard Compliance Methods

The methodology for determining compliance with the Performance Standards set forth in the Consent Order is contained in the Predesign and Compliance Monitoring Plan (May 13, 1996). In general terms, this plan requires reducing the fifteen target VOCs to total less than one (1) ppm in soil and a ninety-five percent reduction in the groundwater contaminant levels in each of the five on-site monitoring wells that have been approved by the USEPA as compliance monitoring points.